MATERIAL SAFETY DATA SHEET

PRODUCT
Galvanized Carbon Steel Pipe & Tube

FOR TRANSPORTATION EMERGENCIES CONTACT:
CANUTEC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Galvanized Carbon Steel Pipe & Tube

APPLICATION/RESTRICTIONS :

COMPANY IDENTIFICATION : COLUMBIA-MBF
6560 Northwest Drive
Mississauga, ON
L4V 1P2 Tel: 905-362-0180

EMERGENCY TELEPHONE NUMBER(S) : **(905) 362-0180 OR 1-866-632-0180 Mon. - Fri. 8:00am – 4:30pm**

2. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

NOTE: Steel products under normal conditions do not present an inhalation, ingestion, or contact health hazard. However, operations such as burning, welding, sawing, brazing, grinding and possibly machining, etc. which result in elevating the temperature of the product to or above its melting point or result in the generation of airborne particulates, may present health hazards.

EFFECTS OF OVEREXPOSURE:
Major Exposure Hazard: INHALATION

Chronic inhalation of high concentrations of iron oxide fumes or dusts may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens.

The inhalation of high concentrations of freshly formed oxide fumes and dusts of Manganese, Copper, Lead and/or Zinc in the respirable particle size range can cause an influenza-like illness termed metal fume fever. Typical symptoms last 12 to 48 hours and are characterized by metallic taste in the mouth, dryness and irritation of the throat, followed by weakness, muscle pain, and chills. No long term effects of metal fume fever have been noted.

3. COMPOSITION/INFORMATION ON INGREDIENTS

NOTE: STEEL PRODUCTS UNDER NORMAL CONDITIONS DO NOT PRESENT AN INHALATION, INGESTION OR CONTACT HEALTH HAZARD (SEE Section 10).

BASE METAL, ALLOYING ELEMENTS AND METALLIC COATINGS	WGT (%)	EXPOSURE LMTS/LC50/LD50 *During operations (such as welding, burning or cutting) when dust or fumes are generated	
		OSHA PEL	ACGIH TLV (1992-1993)
Base metal: Iron	95.7 - 98.3	15mg/M^3 for total particulate as iron oxide-total dust 5mg/M^3 for total particulate respirable fraction	5mg/M^3 for iron oxide fumes
Alloying Elements; Carbon	0.25 max.	None Established	None Established
Manganese	0.95 max.	(c) 5 mg/M^3 - compounds (b) 3 mg/M^3 - fume 1 mg/M^3 - fume	5 mg/M^3 - dust & compounds 1 mg/m^3 - fume (b) 3 mg/M^3 - fume
Phosphorus	0.035 max.	None for inorganic phosphates	None for inorganic phosphates
Sulfur	0.035 max.	5 mg/M^3 as sulfur dioxide (b) 10 mg/M^3 as sulfur dioxide	5.2 mg/M^3 as sulfur dioxide (b) 13 mg/M^3 as sulfur dioxide
Metallic Coating *Zinc CAS NO. 7440-66-6 Zinc Dust or fume	0.5 - 3.00	5 mg/M^3 zinc oxide fume (b) 10 mg/M^3 - zinc oxide fume 10 mg/M^3 - zinc oxide dust 5 mg/M^3 - zinc oxide respirable fraction	10 mg/M^3 - zinc oxide total dust 5mg/M^3 - zinc oxide fume (b) 10 mg/M^3 zinc oxide fume
*Aluminum CAS NO. 7429-90-5 Aluminum Dust or fume	<0.1	15 mg/M^3 - metal dust 5 mg/M^3 - respirable fraction	10 mg/M^3 - dust 5 mg/M^3 - welding fumes
Chromium	<0.0005	1 mg/M^3 - as metal	0.5 mg/M^3 as metal
Polymeric O.D. Coatings	<0.50	n/a	n/a
Polymeric I.D. Coatings	0.1 max.	n/a	n/a

(b) Denotes short term exposure limit (STEL).

(c) Denotes "ceiling limit" which is not to be exceeded at any time.

*Subject to Section EPCRA 313 reporting.

NOTE: These products contain trace quantities of various elements but not at reportable levels under the OSHA Hazard Communication Standard Limit (29CFR 1910.1200)

4. FIRST AID MEASURES

For overexposure to airborne fumes and particulates, remove exposed person to fresh air. If breathing is difficult or has stopped, administer artificial respiration or oxygen as indicated.

Seek medical attention promptly.

Treat metal fume fever by bed rest, and administer a pain and fever reducing medication.

5. FIRE FIGHTING MEASURES

STEEL PRODUCTS IN THE SOLID STATE PRESENT NO FIRE OR EXPLOSION HAZARD

6. ACCIDENTAL RELEASE MEASURES

NOT APPLICABLE TO STEEL IN THE SOLID STATE.

7. HANDLING AND STORAGE

Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Avoid breathing metal fumes and/or dust.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY: For welding or burning - NIOSH/MSHA - approved dust and fume respirators should be used to avoid excessive inhalation of particulates. Appropriate respirator selection depends on the magnitude of exposure.

SKIN: Protective gloves should be worn as required for welding, burning or handling operations.

EYE: Use safety glasses or goggles as required for welding, burning, or handling operations.

VENTILATION: Local exhaust ventilation should be provided when sawing, grinding or machining to prevent excessive dust or fume exposure. During welding, burning or brazing please follow the ANSI Standard Z49.1 "Safety in Welding and Cutting"

OTHER PROTECTIVE EQUIPMENT:
Depending upon the conditions of use and specific work situations, additional protective equipment and/or clothing may be required to control exposures.

9. PHYSICAL AND CHEMICAL PROPERTIES

MELTING POINT

BASE METAL: @ 2750^0

METALLIC COATING: @ $800\text{-}900^0$

APPEARANCE: Bright metallic

ODOR: No Odor

10. STABILITY AND REACTIVITY

Stable under normal conditions of use, storage and transport. Will react with strong acid to liberate hydrogen. At temperatures above the melting point of the coating, galvanized pipe may liberate zinc fumes, carbon monoxide and oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

14. TRANSPORT INFORMATION

15. REGULATORY INFORMATION

16. OTHER INFORMATION

OTHER COMMENTS:
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
Individuals with chronic respiratory disorders (i.e. asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

This information is taken from sources or based upon data believed to be reliable: However ColumbiaMBF makes no warranty as to the absolute correctness or sufficiency of any of the foregoing or that additional or other measures may not be required under particular conditions.

Prepared By : Ken Blanchette
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